

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A gain amplifier with DC offset cancellation circuit, the gain amplifier having an input end coupled to an input signal source, comprising:

~~a gain amplifier, having an input end coupled to an input signal source,~~
a buffer, having an input end coupled to ~~the an~~ output end of the gain amplifier; and
an active low-pass analogue filter, coupled to ~~the an~~ output end of the buffer, for filtering input ~~analogue~~ analog signals at high frequencies, and feeding the filtered buffer output signals to the input end of the gain amplifier to be deducted from the input analog signals in order to obtain a negative feedback, so as to cancel DC bias,

wherein the active low-pass analogue filter includes a variable resistor, an amplifier, a capacitor pair and a comparator, the amplifier being coupled to an output of the variable resistor, the negative feedback being provided from the output of the variable resistor to the input signal source, the capacitor pair being coupled to the amplifier, one input of the comparator being coupled to an output of the amplifier, and a second input of the comparator being coupled to a reference voltage source such that a comparison signal is output by the comparator to the variable resistor after comparing the negative feedback with a reference voltage.

2. (Canceled)

3. (Currently Amended) The gain amplifier with DC offset cancellation circuit of claim 1, wherein the variable ~~capacitor~~ resistor comprises a plurality of metallic oxide semiconductor field effect transistors (MOSFETs).

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4. (Currently Amended) The gain amplifier with DC offset cancellation circuit of claim ~~1~~ 3, wherein the output end of the buffer includes at least two outputs, gates of said plurality of MOSFETs are coupled to the output of the comparator, ~~the~~ sources of said plurality of MOSFETs are coupled to ~~both output ends~~ said outputs of the buffer, and ~~the~~ drains of said plurality of MOSFETs are output to the amplifier for controlling an output voltage.